AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-9. (Canceled)

10. (Currently Amended) An apparatus, comprising:

a masking unit to receive a request vector and to provide a masked request vector, wherein each bit in the request vector represents a requestor and indicates if that requestor is requesting a resource; and

a first priority encoder to receive the masked request vector from the masking unit and to output a signal indicating a selected requestor; and

a second priority encoder to receive the un-masked request vector and to output a signal indicating an alternate selected requestor.

11. (Original) The apparatus of claim 10, wherein the request vector is an N-bit request vector having bits $[b_{N-1}, ..., b_0]$, the masking unit is to mask bits b_L through b_0, b_L representing the previously selected requestor, and the signal output by the first priority encoder represents the least significant bit in the masked request vector that indicates the requestor is requesting a resource.

12. (Original) The apparatus of claim 10, wherein the request vector is an N-bit request vector having bits $[b_{N-1}, ..., b_0]$, the masking unit is to mask bits b_{N-1} through b_L, b_L representing the previously selected requestor, and the signal output by the first priority encoder represents the

most significant bit in the masked request vector that indicates the requestor is requesting a resource.

13. (Canceled)

14. (Currently Amended) The apparatus of claim [13] 10, further comprising:

a selector unit to receive the signals from the first and second priority encoders and to output a signal based on:

the signal from the first priority encoder if at least one bit in the masked request vector indicates that a requestor is requesting a resource, and

the signal from the second priority encoder if no bit in the masked request vector indicates that a requestor is requesting a resource.

15. (Original) The apparatus of claim 14, further comprising:

a grant generator to receive the signal from the selector unit and to provide grant signals to the requestors.

16. (Original) The apparatus of claim 14, wherein the signal from the selector unit is provided to the masking unit.

17. (Original) The apparatus of claim 10, wherein the apparatus is associated with at least one of: (i) a packet network, (ii) a local area network, (iii) an Ethernet network, (iv) a switch, and (v) a router.

18. (Original) The apparatus of claim 10, wherein each requestor is associated with a media application control module.

19. (Original) The apparatus of claim 10, wherein the selected requestor is associated with an information packet to be processed.

20. (Original) The apparatus of claim 10, wherein the apparatus is associated with at least one of: (i) an application specific integrated circuit device, (ii) a field-programmable gate array device, and (iii) a custom integrated circuit.

21. (Currently Amended) An apparatus, comprising:

a storage medium having stored thereon instructions that when executed by a machine result in the following:

determining a request vector, wherein each bit in the request vector represents a requestor and indicates if that requestor is requesting a resource;

masking a portion of the request vector based on a previously selected requestor; and

selecting via a first priority encoder a requestor in accordance with the masked request vector;

selecting via a second priority encoder an alternate selected requester in accordance with the un-masked request vector; and

arranging for a packet to be transmitted via the resource by one of the selected requestor or the alternate selected requester.

22. (Original) The apparatus of claim 21, wherein execution of the instructions further result in:

allocating the resource to the selected requestor.

23. (Currently Amended) A switch, comprising:

an Ethernet interface; and

a resource allocation unit, including:

a masking unit to receive a request vector and to provide a masked request vector, wherein each bit in the request vector represents a requestor and indicates if that requestor is requesting a resource; and

a first priority encoder to receive the masked request vector from the masking unit and to output a signal indicating a selected requestor; and

a second priority encoder to receive the un-masked request vector and to output a signal indicating an alternate selected requestor.

24. (Original) The switch of claim 23, wherein each requestor is associated with a media application control module and the resource is associated with information packet processing.

25. (New) A method, comprising:

determining a request vector, wherein each bit in the request vector represents a requestor and indicates if that requestor is requesting a resource;

masking a portion of the request vector based on a previously selected requestor;

selecting via a first priority encoder a requestor in accordance with the masked request vector;

selecting via a second priority encoder an alternate selected requester in accordance with the un-masked request vector; and

arranging for a packet to be transmitted via the resource by one of the selected requestor or the alternate selected requester

26. (New) The method of claim 25, wherein the request vector is an N-bit request vector having bits $[b_{N-1}, ..., b_0]$, and said masking comprises:

masking bits b_L through b_0 in the request vector, wherein b_L represents the previously selected requestor.

27. (New) The method of claim 26, wherein said masking comprises:

creating an N-bit mask vector having bits $[m_{N-1}, ..., m_0]$, wherein bits m_{N-1} through m_{L+1} are set to one and bits m_L through m_0 are set to zero; and

combining the request vector and the mask vector via a Boolean AND operation.

28. (New) The method of claim 26, wherein said selecting comprises:

selecting the requestor associated with the least significant bit in the masked request vector that indicates the requestor is requesting a resource.

29. (New) The method of claim 28, wherein said selecting is performed via a priority encoder.

30. (New) The method of claim 26, wherein said selecting comprises:

selecting the requestor associated with the most significant bit in the masked request vector that indicates the requestor is requesting a resource.

31. (New) The method of claim 25, further comprising:

allocating the resource to the selected requestor.